

CLAIMS

1        1.        An endocrine cell microdisk comprising a discoid microporous  
2        encapsulated endocrine cell for transplantation into an animal body to  
3        correct a hormonal deficiency.

4        2.        An endocrine cell microdisk according to Claim 1 in which the  
5        endocrine cell is an insulin producing cell.

6        3.        An endocrine cell microdisk according to claim 1 in which said  
7        disk has a ratio of diameter to thickness of at least four.

8        4.        An endocrine cell microdisk according to claim 1 in which said  
9        disk has a ratio of diameter to thickness of in the range of from six to  
10       twenty.

11       5.        An endocrine cell microdisk according to claim 1 in which said  
12       disk has at least one concave face.

13       6.        An endocrine cell microdisk according to claim 1 in which said  
14       disk has two opposed concave faces.

15       7.        An endocrine cell microdisk according to claim 6 in which the  
16       concavities are maintained by internal joining structure.

17       8.        An endocrine cell microdisk according to claim 7 in which said  
18       joining structure extends between opposing faces of said disk.

19 9. A flattened macrochamber with one or more surface concavities  
20 in which the endocrine cells are contained in a microporous membrane.

21 10. A flattened macrochamber as in claim 8 in which said concavities  
22 are maintained by internal joining structure.

23 11. An endocrine cell microdisk comprising a microporous mem-  
24 brane having first and second opposed faces joined together at the  
25 periphery thereof and forming an extended flattened structure of lateral  
26 extent substantially greater than the maximum thickness between the  
27 surfaces and containing endocrine cellular material for implantation as a  
28 unit into an animal body.

29 12. An endocrine cell microdisk according to claim 11 in which said  
30 lateral extent is at least four times said thickness.

31 13. An endocrine cell microdisk according to claim 11 in which said  
32 microdisk is formed generally in the shape of an erythrocyte.

33 14. An endocrine cell microdisk according to claim 11 which includes  
34 means for maintaining at least one concavity in a lateral surface of said  
35 disk.

36 15. An endocrine cell microdisk according to claim 11 which includes  
37 at least one tab extending between said opposed faces and maintaining a  
38 concavity in at least one of said faces.

39 16. An endocrine cell microdisk according to claim 15 which includes  
40 a plurality of tabs extending between said opposed faces and maintaining  
41 a plurality of concavities in at least one of said faces.